

77 Braemar Road, Sutton Coldfield, West Midlands, B73 6LZ.

Tel. 0121 354 5552

E-mail: tc@msc.tc

Directors

J.C.Cooper T.F.Cooper



12/24 Volt 150Amp DC Panel

This D.C. Panel has been designed primarily for the canal boat and small craft market. It consists of twelve thermal re-settable circuit breakers, two LCD digital meters with backlights, and one 150Amp shunt which can be mounted in the +ve or -ve battery lead. (other values to special order). The voltmeter can be switched to the engine start or domestic batteries but the current meter would normally be used to monitor the domestic battery bank only.

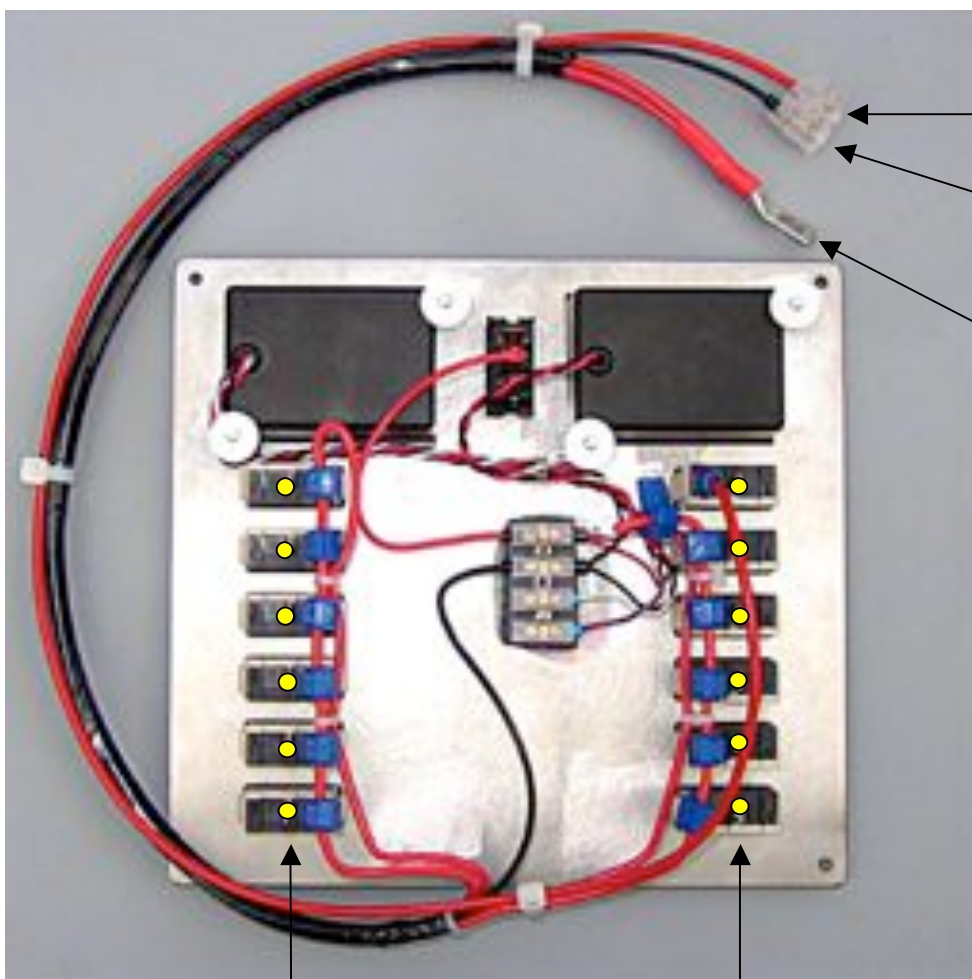
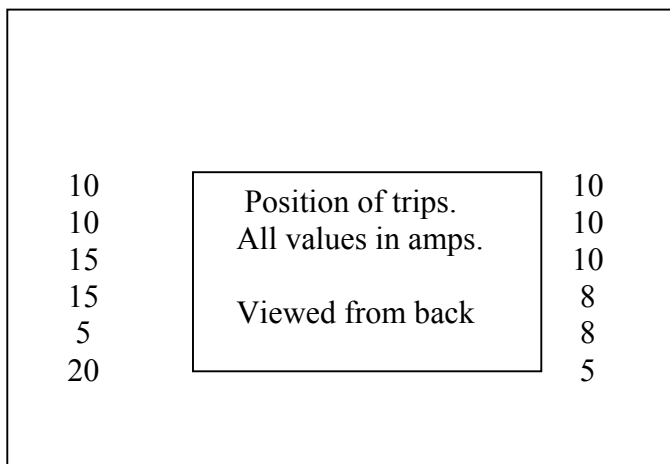
It is supplied with a selection of trips of different values, and a set of legends that can be placed in the chosen position. Each legend is placed in an indented area to hide the edges of the label.

There is also an option to bypass the main battery switch for a bilge pump etc.

Trips

- 1 X 20 Amp
- 2 X 15 Amp
- 5 X 10 Amp
- 2 X 8 Amp
- 2 X 5 Amp

Trip Positions



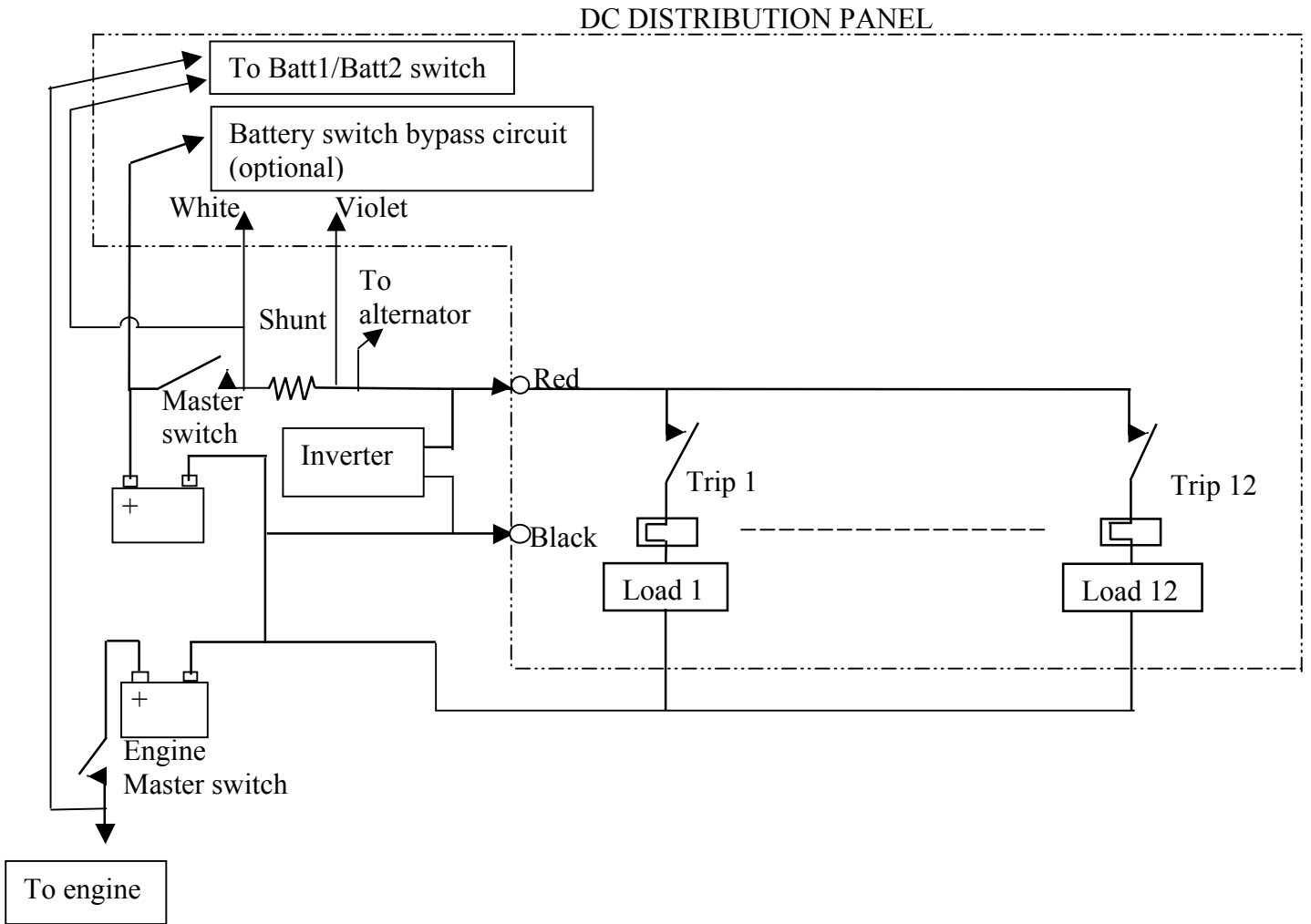
- Battery Switch By-pass wire optional)
- Battery Negative (Black)
- Main Power Feed 12/24 volts +ve

Connect loads to contacts highlighted by yellow spots.

Wire the panel as shown in the above photograph. The black wire only needs to be small to support the current for the meters but the main +ve power feed must support the total current distributed by the panel.

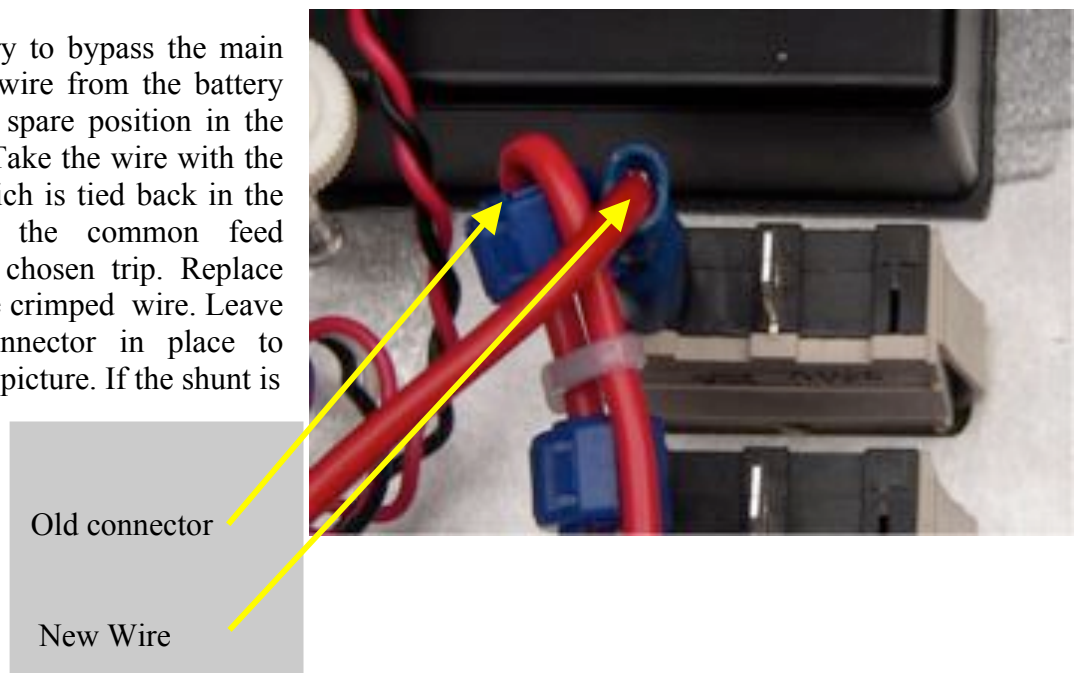
The shunt can be positioned in either the positive or negative battery lead but the polarity of the white and violet shunt connections should be noted to ensure that the meter will read minus when current is being drawn from the battery.

Typical wiring diagram.



Battery Bypass Option.

Should it be necessary to bypass the main battery switch run a wire from the battery +ve as shown to the spare position in the two way block (red). Take the wire with the blue crimped end which is tied back in the loom, and remove the common feed connection from the chosen trip. Replace this feed with the blue crimped wire. Leave the now unused connector in place to protect the wire.:- see picture. If the shunt is positioned after the battery switch as shown, current drawn by this circuit will not be shown on the meter.



Trip selection suggestions.

Lighting	10/15A
Fridge	10A
TV/Radio	8/10A
W.C.	20A
Tunnel light	8A
Bilge Pump	8/10A
Water pump	10A
Shower pump	8A

These are just a few suggestions. Remember to allow for the increase in battery voltage when the engine is running. For example if cabin lights are switched on in a tunnel they will draw considerably more current than when the engine is not running. The same applies when connected to a charger. If in doubt ring for advice. These trips are Thermal trips and as such will allow higher currents than rating for a short period of time.

Battery State

Observing the two meters gives a good indication of state of charge. When a battery is on charge it will first of all draw high current and the voltage will rise until the voltage reaches 14-14,5 volts. By this time current will have reduced but could still be 10-20A for a 100 AH Battery. The battery can be considered to be fully charged when current drops to approximately 1A per battery :-i.e. if three batteries are in parallel the figure will be approximately three amps.

I hope you are satisfied with this product and that it continues to give good service.

WARNING

Remember that although only 12volts the current supply to the panel is unlimited and care should be exercised to ensure that all connections are properly tightened. The shunt should be mounted in a protected area as close to the battery as practical and be well insulated and protected. In use it is normal for the shunt to get hot to the touch when operating at high currents.